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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,383	07/28/2001	Shi-You Ding	NREL01-37	9967

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EXAMINER

PATTERSON, CHARLES L JR

ART UNIT PAPER NUMBER

1652

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/917,383

Applicant(s)

DING ET AL.

Examiner

Charles L. Patterson, Jr.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-67 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

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Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-12, 14-15, 27-34 and 43-44, drawn to a GuxA peptide and a fusion protein, classified in class 435, subclass 200 and 209.
- II. Claims 13, 16-26, 36-42 and 48-54, drawn to a polynucleotide, a vector, a host cell and a method of producing the GuxA polypeptide using the polynucleotide, classified in class 435, subclass 320.1, 252.3, 410 and class 536, subclass 23.2.
- III. Claim 35, drawn to a cellulase-substrate comprising the polypeptide of claim 27 bound to cellulose, classified in class 435, subclass 200 and class 530, subclass 370.
- IV. Claims 45-47, drawn to and antibody, classified in class 530, subclass 387.9.
- V. Claims 55-57, drawn to a set of primers, a probe and an assay method using the primers, classified in class 435, subclass 6 and class 536, subclass 24.3.
- VI. Claims 58-62, drawn to a method for assessing the carbohydrate degradation activity of GuxA comprising analyzing the carbohydrate degradation in the presence of GuxA, classified in class 435, subclass 18.
- VII. Claims 63-67, drawn to a method for reducing cellulose, classified in class 435, subclass 101.

It is noted that claims 13 and 16-26 are drawn to peptides or compositions further comprising a nucleic acid sequence. Since peptides cannot normally further comprise a nucleic acid sequence, these claims have been classified as polynucleotides. Claims 55-57 are drawn to polynucleotides "derived from the polynucleotide molecule of claim 27". Since claim 27 is drawn

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to a polypeptide, not a polynucleotide, these claims have been classified as polynucleotides.

It is further noted that at least claims 46, 49 and 54 depend upon themselves. The examiner has grouped these claims in the group that seemed appropriate.

The inventions are distinct, each from the other because of the following reasons:

Groups I, II and IV are completely different chemical compounds that are patentably distinct.

Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as for its enzymatic activity. See MPEP § 806.05(d).

Inventions II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together and the nucleotide of Group II is useful for producing an enzyme by translation whereas the nucleotide fragments of Group V are useful in detecting or producing a protein by hybridization or PCR.

Inventions I and VI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP §

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806.05(h)). In the instant case the product as claimed can be used in a materially different process such as for its enzymatic activity not related to the method of assessing carbohydrate degrading activity.

Inventions I and VII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP §

806.05(h)). In the instant case the product as claimed can be used in a materially different process such as for its enzymatic activity, not related to reducing cellulose.

It is noted that either or both groups VI and VII might be combined with group I if appropriate explanation is given as to how the polypeptide of group I relates to carbohydrate degradation as compared to cellulose hydrolysis or "reducing cellulose". In particular, it is not known whether "reducing cellulose" is concerned with degrading cellulose by hydrolysis or oxidoreductively changing cellulose.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles L. Patterson, Jr., PhD, whose

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telephone number is 703-308-1834. The examiner can normally be reached on Monday - Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 703-308-3804. The fax phone number is 703-308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.



Charles L. Patterson, Jr.  
Primary Examiner  
Art Unit 1652

Patterson  
March 21, 2003